AMENDMENTS TO THE CLAIMS

This listing replaces all prior version and listing of claims in the application:

1. (Original) A method of identifying a modulator of a TGR4 polypeptide that has G-protein coupled receptor activity and (A) comprises at least 70% amino acid sequence identity to SEQ ID NO:4, (B) comprises at least 20 contiguous amino acids of SEQ ID NO:4, or (C) comprises the amino acid sequence of SEQ ID NO:4; wherein the method comprises:

contacting a compound with a recombinant TGR4 polypeptide; and

determining the level of binding of nicotinic acid to the TGR4 polypeptide;

comparing the level of binding in the presence of the compound to the level of binding in the absence of the compound.

2. (Original) The method of claim 1, wherein the step of determining the level of binding comprises detecting nicotinic acid binding in a competitive binding assay.

3. (Original) The method of claim 1, wherein the step of determining the level of binding comprises detecting an alteration in a nicotinic acid-induced TGR4 activity.

4. (Original) The method of claim 3, wherein the nicotinic acid-induced TGR4 activity is an increase in intracellular calcium.

5. (Original) A method of treating a patient with a TGR4-associated disorder, the method comprising administering a therapeutically effective amount of a compound identified using the method of claim 1.

6. (Original) The method of claim 5, wherein the TGR4-associated disorder is hyperlipidemia.

7. (Original) The method of claim 5, where the TGR4-associated disorder is a disorder of the immune system.

8. (Original) A method of identifying a modulator of a TGR183 polypeptide that has G-protein coupled receptor activity and (A) comprises at least 70% amino acid sequence identity to SEQ ID NO:6, (B) comprises at least 20 contiguous amino acids of SEQ ID NO:6, or (C) comprises the amino acid sequence of SEQ ID NO:6; wherein the method comprises:

contacting a compound with a recombinant TGR183 polypeptide; and

determining the level of binding of nicotinic acid to the TGR183 polypeptide in comparison to the level of binding in the absence of the compound.

9. (Original) The method of claim 8, wherein the step of determining the level of binding comprises detecting nicotinic acid binding in a competitive binding assay.

10. (Original) The method of claim 8, wherein the step of determining the level of binding comprises detecting an alteration in a nicotinic acid-induced TGR183 activity.

11. (Currently Amended) The method of claim ~~3~~ 10, wherein the nicotinic acid-induced TGR183 activity is an increase in intracellular calcium.

12. (Original) A method of treating a patient with a TGR183-associated disorder, the method comprising administering a therapeutically effective amount of a compound identified using the method of claim 8.

13. (Original) The method of claim 12, wherein the TGR183-associated disorder is hyperlipidemia.

14. (Original) A method of modulating a TGR4-associated disorder, the method comprising administering a compound identified using the method of claim 1.

15. (Original) A method of modulating a TGR4-associated disorder, the method comprising

administering a compound that inhibits a nicotinic acid-induced TGR4 activity, but not nicotinic acid binding to TGR4.

16. (Original) The method of claim 15, wherein the compound is an antibody.

17. (Original) A method of modulating a TGR183-associated disorder, the method comprising administering a compound identified using the method of claim 8.

18. (Original) A method of modulating a TGR183-associated disorder, the method comprising administering a compound that inhibits a nicotinic acid-induced TGR183 activity, but not nicotinic acid binding to TGR183.

19. (Original) The method of claim 18, wherein the compounds is an antibody.